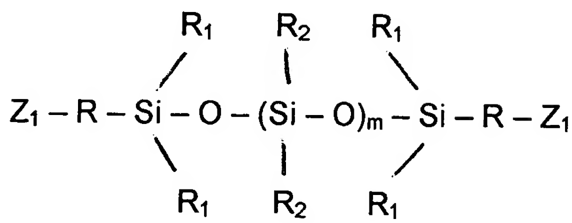
We claim:

1. A prepolymer precursor comprising:



wherein the R groups may be the same or different saturated C_{1-10} hydrocarbon substituents; the R_1 groups may be the same or different C_{1-10} alkyl substituents; the R_2 groups may be the same or different selected from the group consisting of C_{1-10} alkyl substituents, C_{1-10} fluoroalkyl substituents, C_{2-20} alkyl-fluoroalkyl substituents and C_{6-30} aromatic substituents; m is a natural number greater than 4 representing the sum of siloxane moieties with randomly differing R_2 groups as defined above so as to have a molar ratio of aromatic substituents to alkyl substituents no less than 1:4 such that the prepolymer molecular weight is at least approximately 1000 and refractive index is at least approximately 1.45; and the Z_1 groups may be the same or different selected from the group consisting of –OH and $-NH_2$.

2. The prepolymer precursor of claim 1 wherein at least one of said Z_1 groups is --OH.

3. The prepolymer precursor of claim 1 wherein at least one of said Z_1 groups is $-NH_2$.

4. The prepolymer precursor of claim 1 wherein each R_1 group is methyl and each R_2 group is phenyl.

5. The prepolymer precursor of claim 1 wherein each R group is trimethylene or tetramethylene.

6. The prepolymer precursor of claim 1 wherein each R_2 group is the same selected from the group consisting of phenyl, naphthyl and methyl.

7. The prepolymer precursor of claim 1 wherein one R_2 group is phenyl and the other R_2 group is methyl.

8. A method of producing the prepolymer precursors of claim 1 comprising:

reacting 1,3-bis-hydroxyalkyl polysiloxane or 1,3-bis-aminoalkyl polysiloxane with at least one silane selected from the group consisting of dimethyldimethoxysilane, diphenyldimethoxysilane and methylphenyldimethoxysilane.

9. A method of producing the prepolymer precursors of claim 1 comprising:

reacting 1,3-bis-hydroxyalkyl polysiloxane or 1,3-bis-aminoalkyl polysiloxane with at least one cyclic polysiloxane selected from the group consisting of 1,3,5-trimethyl-1,3,5-triphenylcyclotrisiloxane, 1,1,3,3,5,5-hexamethylcyclotrisiloxane and 1,1,3,3,5,5-hexaphenylcyclotrisiloxane.

10. The method of claim 8 or 9 wherein said 1,3-bis-hydroxyalkyl polysiloxane is 1,3-bis-hydroxybutyltetramethyldisiloxane.

11. The method of claim 8 or 9 wherein said 1,3-bis-aminoalkyl polysiloxane is 1,3-bis-aminopropyltetramethyldisiloxane.

12. A polymeric composition produced through the copolymerization of one or more prepolymers produced from one or more prepolymer precursors of claim 1, with one or more aromatic monomers, alkyl monomers, hydrophilic monomers or a combination thereof.

13. The polymeric composition of claim 12 wherein said one or more aromatic monomers are selected from the group consisting of acrylate, methacrylate, acrylamide and methacrylamide, each with aromatic substituents.

14. The polymeric composition of claim 12 wherein said one or more aromatic monomers are selected from the group consisting of phenyl acrylate, phenyl(meth)acrylate, phenyl acrylamide, benzyl acrylate, benzyl acrylamide, phenylethylacrylate, phenyl(meth)acrylamide, phenylethyl(meth)acrylate and benzyl(meth)acrylate.

15. The polymeric composition of claim 12 wherein said one or more alkyl monomers are selected from the group consisting of C_{1-20} alkyl acrylate, C_{1-20} alkyl methacrylate, C_{5-20} acrylamide and C_{5-20} methacrylamide.

16. The polymeric composition of claim 12 wherein said one or more alkyl monomers are selected from the group consisting of methyl acrylate, ethyl acrylate, n-propyl acrylate, n-butyl acrylate, n-hexyl acrylate, n-octyl acrylate, 2-ethylhexyl acrylate, n-propyl methacrylate, n-butyl methacrylate, n-hexyl methacrylate, n-octyl methacrylate, 2-ethylhexyl methacrylate and n-octyl acrylamide.

17. The polymeric composition of claim 12 wherein said one or more hydrophilic monomers are selected from the group consisting of N,N-dimethyl acrylamide, N-vinylpyrrolidone, 2-hydroxyethyl methacrylate (HEMA), glycerol methacrylate, 2-hydroxyethyl acrylate, acrylamide, n-methyl acrylamide, acrylic acid and (meth)acrylic acid.

18. A method of producing the polymeric composition of claim 12 useful in the manufacture of ophthalmic devices comprising:

reacting one or more polysiloxane prepolymers with one or more aromatic monomers, an alkyl monomers or hydrophilic monomers.

19. The method of claim 18 wherein said one or more aromatic monomers are selected from the group consisting of acrylate, methacrylate, acrylamide and methacrylamide, each with aromatic substituents.

20. The method of claim 18 wherein said one or more aromatic monomers are selected from the group consisting of phenyl acrylate, phenyl(meth)acrylate, phenyl acrylamide, benzyl acrylate, benzyl acrylamide, phenylethylacrylate, phenyl(meth)acrylamide, phenylethyl(meth)acrylate and benzyl(meth)acrylate.

21. The method of claim 18 wherein said one or more alkyl monomers are selected from the group consisting of C_{1-20} alkyl acrylate, C_{1-20} alkyl methacrylate, C_{5-20} acrylamide and C_{5-20} methacrylamide.

22. The method of claim 18 wherein said one or more alkyl monomers are selected from the group consisting of methyl acrylate, ethyl acrylate, n-propyl acrylate, n-butyl acrylate, n-hexyl acrylate, n-octyl acrylate, 2-ethylhexyl acrylate, n-propyl methacrylate, n-butyl methacrylate, n-hexyl methacrylate, n-octyl methacrylate, 2-ethylhexyl methacrylate and n-octyl acrylamide.

23. The method of claim 18 wherein said one or more hydrophilic monomers are selected from the group consisting of N,N-dimethyl acrylamide, N-vinylpyrrolidone, 2-hydroxyethyl methacrylate (HEMA), glycerol methacrylate, 2-hydroxyethyl acrylate, acrylamide, n-methyl acrylamide, acrylic acid and (meth)acrylic acid.

24. A method of producing an ophthalmic device using the polymeric composition produced through the method of claim 18 comprising:

casting said polymeric composition in the form of a rod;

lathing or machining said rod into disks; and

lathing or machining said disks into an ophthalmic device.

25. A method of using the ophthalmic device produced through the method of claim 24 comprising:

making an incision in the cornea of an eye; and

implanting said ophthalmic device.

26. A method of producing an ophthalmic device using a polymeric composition produced from one or more of the prepolymer precursors of claim 1 comprising:

pouring said polymeric composition prior to curing into a mold;

curing said polymeric composition; and

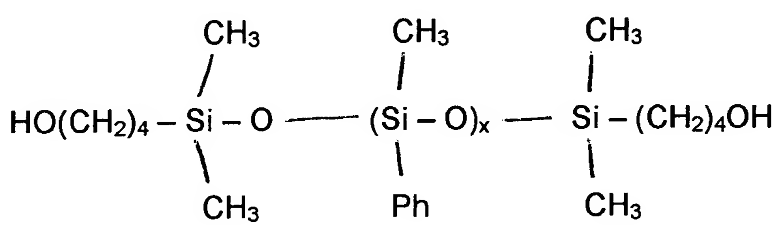
removing said polymeric composition from said mold following curing thereof.

27. A method of using the ophthalmic device produced through the method of claim 24 or 26 comprising:

making an incision in the cornea of an eye; and

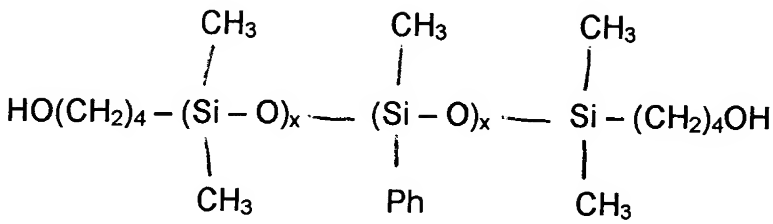
implanting said ophthalmic device.

28. A prepolymer precursor comprising:



wherein the Ph groups are the same or different $C_{6\text{-}30}$ aromatic substituents and x is a natural number such that the prepolymer molecular weight is at least approximately 1000 and refractive index is at least approximately 1.45.

29. A prepolymer precursor comprising:



wherein the Ph groups are the same or different C_{6-30} aromatic substituents and x is a natural number such that the prepolymer molecular weight is at least approximately 1000 and refractive index is at least approximately 1.45.